

Name: _____

5/31/16

A2 CC Review for Q4 T3

Callahan/Braun

Determine if the scenarios involve mutually exclusive events:

1. A spinner has an equal chance of landing on each of its eight numbered regions. After spinning, it lands in region 3 or 6.
2. A bag contains 6 yellow jerseys numbered 1-6. The bag also contains 4 purple jerseys numbered 1-4. You randomly pick a jersey. It is purple or has a number greater than 5.

Determine whether the scenario involves independent or dependent events:

3. You flip a coin and then roll a fair 6 sided die. The coin lands heads up and the die shows a 1.
4. A bag contains 8 red marbles and 4 blue marbles. You randomly pick a marble and then pick a second marble without returning the marbles to the bag. The first marble is red and the second marble is blue.

Find each of the following probabilities:

5. A magazine contains 14 pages. You open to a random page. What is the probability that the page number is 3 or 7?
6. You flip a coin and then roll a fair 6 sided die. What is the probability that the coin lands heads and the die shows an even number?
7. A box contains 3 red cards numbered 1-3. The box also contains 5 black cards numbered 1-5. What is the probability that you pick a card and it is black or has an odd number?
8. A basket contains 5 apples and 7 peaches. You randomly pick a fruit and eat it and then pick another piece and eat it. What is the probability that the first piece was an apple and the second was a peach?

Determine if events A and B are independent:

9. $P(A) = \frac{2}{5}$ $P(B) = \frac{1}{5}$ $P(A \text{ and } B) = \frac{2}{25}$

$$10. P(A) = \frac{2}{5} \quad P(B) = \frac{1}{4} \quad P(A \text{ and } B) = \frac{1}{25}$$

$$11. P(A) = \frac{11}{20} \quad P(A \text{ or } B) = \frac{283}{400} \quad P(A \text{ and } B) = \frac{77}{400} \quad P(\text{not } B) = ?$$

Events A and B are Independent. Find the missing probability.

$$12. P(A) = \frac{1}{4} \quad P(B) = \frac{3}{5} \quad P(B | A) = ?$$

$$13. P(A) = \frac{3}{10} \quad P(B) = \frac{13}{20} \quad P(A \text{ and } B) = ?$$

Determine if events A and B are mutually exclusive:

$$14. P(A) = \frac{3}{10} \quad P(B) = \frac{1}{2} \quad P(A \text{ or } B) = \frac{4}{5}$$